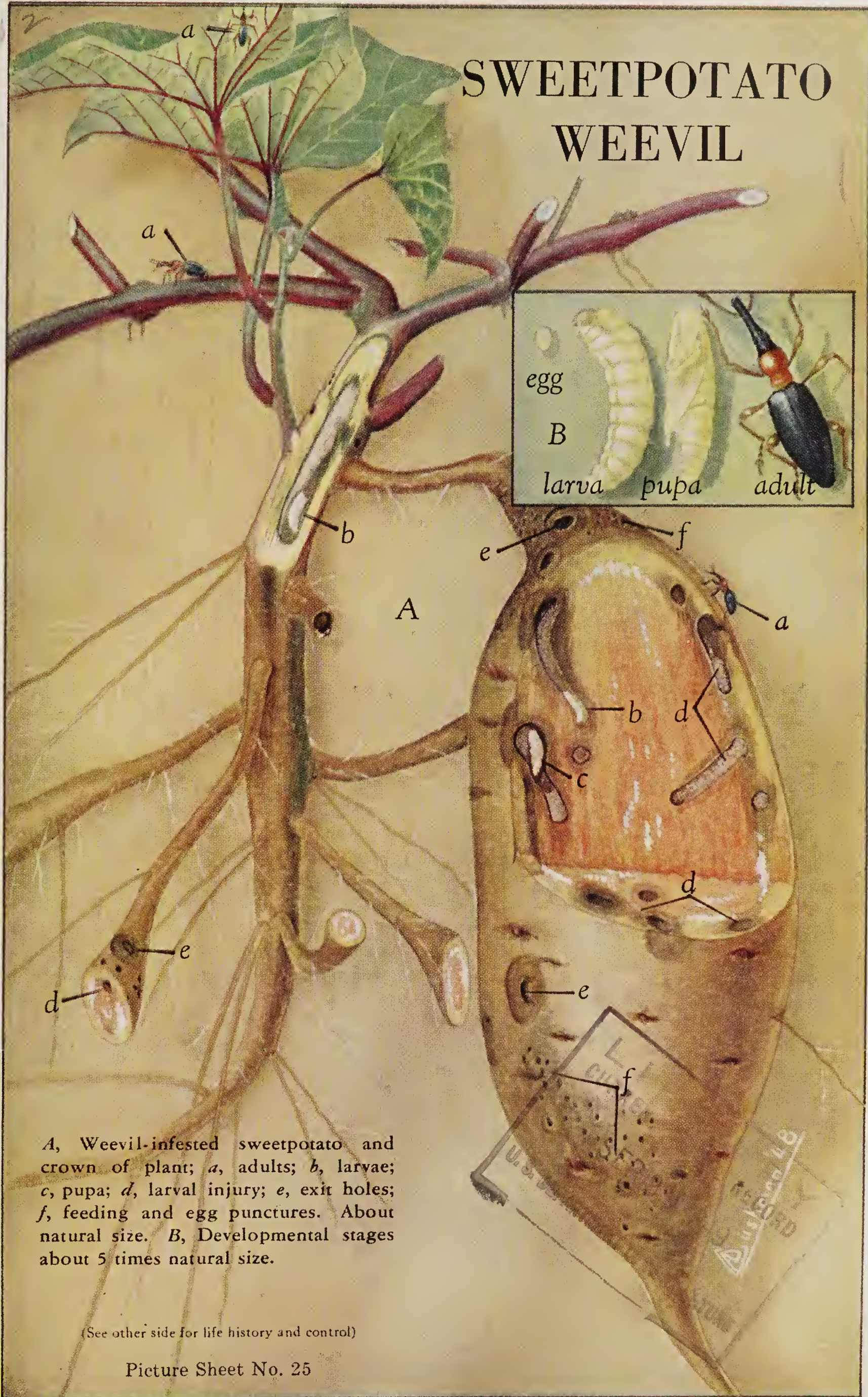


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SWEETPOTATO WEEVIL



A, Weevil-infested sweetpotato and crown of plant; *a*, adults; *b*, larvae; *c*, pupa; *d*, larval injury; *e*, exit holes; *f*, feeding and egg punctures. About natural size. B, Developmental stages about 5 times natural size.

(See other side for life history and control)

Picture Sheet No. 25

SWEETPOTATO WEEVIL

(*Cylas formicarius elegantulus* (Sum.))

Life History and Injury

The sweetpotato weevil is the most destructive insect pest attacking the sweetpotato crop. The adult weevil lays its eggs in small holes, which it punctures in the plant stems near the surface of the soil, or directly in the potatoes when it can reach them. In about a week the eggs hatch into small, white grubs, which feed and grow in the vines or in the potatoes. In 2 or 3 weeks the grub is fully grown and about three-eighths of an inch long. While in the stem or potato, the grub changes into the pupa, or resting stage, which is white and slightly smaller than the grub. After 7 or 8 days the adult weevil crawls out of its pupal skin and emerges from the sweetpotato plant to feed and mate. The females are then ready to lay eggs for another generation. The weevils are about one-fourth of an inch long and, because of their long legs and slim body, look like large ants. If the weather is favorable, the weevil may live for several months.

The adult weevils injure the sweetpotato plant by feeding on the leaves, vines, and roots, and the grubs by feeding within the stems, roots, and potatoes. Small holes in groups on the surface of the potatoes are either feeding marks or holes made by females in laying their eggs. Larger holes are made by newly developed weevils when they emerge from the sweetpotatoes. If weevily potatoes are cut open, the grub-made tunnels can be seen, often with grubs or pupae in them. Infested sweetpotatoes have a bitter taste and are unfit for food.

The weevil is known to exist in sections of Alabama, Florida, Georgia, Louisiana, Mississippi, South Carolina, and Texas.

Prevention, Eradication, and Control

Most infestations of the sweetpotato weevil are established in new areas when sweetpotato plants, seed, or table potatoes are brought in from infested areas. Quarantines are maintained in the principal sweetpotato-growing States to prevent introduction of the weevil, and by States in which it is present to prevent further spread and to assist in its eradication and control. Most States maintaining quarantines permit entry of commercial sweetpotatoes from infested areas only when the stock has been fumigated with the prescribed dosage of methyl bromide. The United States Department of Agriculture is cooperating with the States in the control and prevention of spread of this weevil.

In areas where infestations are light the pest can be eradicated if it is deprived of its food for about one year. The procedures are as follows:

1. Plant no sweetpotatoes for one year in a zone extending $\frac{1}{2}$ to 1 mile from any known infestation.
2. On infested farms: (a) Dispose of all remaining sweetpotatoes by February 1 or earlier by dehydration, feeding to livestock, or burning. (b) Immediately after cleaning up the storage place, treat it with a DDT spray. Use either an emulsion concentrate or a wettable powder, diluted with water to contain the equivalent of $\frac{1}{2}$ pound of technical DDT in each 7 $\frac{1}{2}$ gallons of spray. Apply the spray to all surface areas, stopping before it begins to run off. (c) At harvesttime remove all sweetpotatoes from the field and do not store infested potatoes. Destroy all roots, crowns, small sweetpotatoes, scraps, and volunteer plants. Graze livestock on the field after harvest if possible. Plow old sweetpotato fields at least twice during the winter.

In commercial areas where fields are generally infested with the weevil, effective control may be had by the following practices:

1. Use State-certified seed sweetpotatoes. If seed is selected locally at harvesttime, treat it thoroughly with 10-percent DDT dust at the rate of 1 pound to 6 to 8 bushels of seed and store the seed away from any food products for man or animals.
2. Follow clean-up practices given for light infestations (2, b and c).
3. Destroy plants and tubers in seedbeds as soon as sufficient plants have been produced.
4. Rotate field plantings. Do not follow sweetpotatoes with sweetpotatoes. Plant the new crop as far as possible from the sweetpotato crop of the previous year.

CAUTION. Do not let DDT sprays and dusts reach any food products for man or animals. DDT is poisonous and should be handled with care. Store it in a dry place where children and animals will not have access to it.